ACCOUNTING FOR GREENHOUSE GASES EMISSIONS ALLOWANCES IN ROMANIA

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Abstract:
The present paper tries to analyze the accounting challenges that the implementation of EU Emissions Trading Scheme has risen. On 2 December 2004, IASB has issued an interpretation regarding the accounting of the GHG emissions allowances (IFRIC 3 „Emission Rights"). This interpretation should have been effective for annual periods beginning after 1 March 2005, the first year of the EU Emission Trading Scheme implementation. Less than a year after it was issued, IFRIC has withdrawn IFRIC 3. In December 2007, IASB has started a new project in order to provide guidance on accounting for carbon allowances called Emissions Trading Schemes Project. In the absence of an accounting standard regarding the accounting of these emissions allowances a diversity of accounting practices have been identified. Nowadays, there are three main accounting practices for the recognition of the emissions allowances and the GHG emissions liabilities: IFRIC 3 approach, the government grants approach and the net liability or off balance sheet approach.

The accounting treatment of greenhouse gas emissions allowances by Romanian companies resembles the net liability or off balance sheet approach. Finance Ministry Order no. 1118/2012 states that GHG emission certificates should be recognized as fixed assets (if the entity is expecting a profit in the long term) or in the category of short term investments (if the entity is expecting a profit in the short term). The accounting of the greenhouse gas emissions allowances described above is applicable mainly to traders of such certificates and not for the installations in the scope of the EU ETS directive, which should recognize GHG emissions off balance sheet, at their nominal value (nil if received for free). The shortfall or excess of allowances will be recognized in the profit or loss as they are bought or sold by the entity (the accounting treatment imposed by Finance Ministry Order no. 3055/2009).

Keywords: *accounting for greenhouse gas emissions, sustainability accounting, carbon accounting, GHG allowances accounting*

JEL Classification: *M40, M48*

1. Introduction

The European Union's Emission Trading Scheme (EU ETS) is the first large scale (international) operational cap and trade scheme. Its aim is to reduce EU's greenhouse gases emissions by 20% till 2020. Cap and trade schemes like the EU ETS are meant to decrease the greenhouse gas emissions in a cost-effective way by allowing the market decide the most economically efficient way to cut the greenhouse gas emissions.

The regulatory body establishes a cap on greenhouse gas emissions and then it allocates greenhouse gas emission allowances throughout the EU (in the case of EU ETS there is an overall EU emissions cap starting with the third phase). One EU ETS allowance permits an installation to release the equivalent of one tonne of carbon dioxide.

The organizations that operate the installations that are part of the EU ETS can trade these allowances. If an installation has emitted less than its allowances, it can sell the spare allowances to another organization that has fewer allowances than its GHGs emissions. This will constitute an incentive for the operators of the installations where it is cheap to reduce emissions to diminish the GHG emissions and to sell the allowances to the operators of the installations where the reduction of GHGs emissions is more expensive than to buy the allowances. This mechanism enables operators to meet the overall GHGs emission limit at the lowest possible cost.

The system is currently in its third operating phase that has begun on the 1st of January 2013. The year 2013 has marked the beginning of the 3rd Phase of the European Union Emission Trading Scheme. It also marks the end of Kyoto's protocol first commitment phase. In this third EU ETS stage, 50% of EU Allowances (EUAs) and 15% of EU Aviation Allowances (EUAAs) will be auctioned.

The introduction of the EU ETS poses an interesting challenge to accounting. The absence of accounting standards regarding the accounting of emissions allowances has given birth to a diversity of accounting practices, which makes the financial statements of large companies in Europe, taking part in EU ETS, difficult to compare. There are also a lot of concerns about the true and fair image offered by this variety of accounting models.

2. The Kyoto Protocol

The Kyoto protocol has been adopted in Kyoto, Japan, on 11 December 1997 and it entered into effect on 16 February 2005. It was signed by a party of industrialized countries and its goal is to set the legally binding targets for emission reduction of the six major greenhouse gases (GHGs) by an average of five per cent compared to 1990 levels till 2012.

The Kyoto protocol established three flexibility mechanisms:

- Emissions trading - the Kyoto protocol implementation for a cap and trade scheme, a mechanism that allows an authority to set an emission limit or a cap, yet let the market mechanisms decide where it is cheaper to invest in emission reduction.
- Clean development mechanism (CDM) - this mechanism, allows a developed country to implement an emission-reduction project in developing countries. The country will earn certified emission reduction (CER) credits, which will help it in meeting its targets assumed under Kyoto Protocol.
- Joint implementation (JI) is a mechanism that allows any country in the Annex I of the Kyoto protocol, to invest in projects in another Annex I country as an alternative to reduce their own CO2 emissions. This allows countries that have adopted the Kyoto protocol to achieve their set targets by investing where the emissions reductions are cheaper.

These mechanisms are implemented using a series of certificates or units:

- AAUs - Assigned Amount Units are units that represent an allowance to emit GHGs. One AAU is equivalent to a metric tonne of carbon dioxide or other GHG equivalents. AAUs are the building blocks for the implementation of emissions trading mechanism as the countries that have AAUs to spare because their emissions are below their Kyoto goals can sell those units to other countries that are exceeding their "assigned amounts".
- ERUs – Emission reduction units are used to implement the Joint Implementation mechanism. An ERU unit is equivalent to a reduction of GHG emissions by one metric tonne of equivalent carbon dioxide.
- CERs – Certified emission reductions are certificates issued in the Clean Development Mechanism (CDM) put in place by the Kyoto Protocol. These certificates are awarded to entities that develop projects to reduce greenhouse gas emissions in developing countries. CREs can be traded and used to meet the requirements of entities under emission trading schemes.
- RMUs or Removal Units represent an allowance to emit one metric tonne of carbon dioxide equivalent. RMUs are issued for activities that remove GHGs by land use, land-use change and forestry (LULUCF) (e.g. by creating carbon sinks activities such as planting trees or managing forests (United Nations Framework Convention on Climate Change, 2012))

2. The EU Emission Trading Scheme

The EU Emission Trading Scheme has been implemented by the EC directive no. 2003/87/EC. This directive has been revised by the EC directive 2009/29/EC (EU, 2003).

The EU ETS is one of the building blocks for achieving the "20-20-20" targets, by 2020:

- a 20% reduction in EU GHGs emissions compared with 1990 levels;
- a 20% consumption share for energy from renewable resources;
- an improvement by 20% of the energy efficiency in EU countries.

EU ETS system has started on 1 January 2005, being divided into three compliance periods:

- The first started on 1 January 2005 and it ended on 31 December 2007. Romania has been involved in this stage only partially as the country has joined EU only on 1 January 2007 (Ministerul Mediului si Pădurilor, 2012). Approximately 20.000 installations were included in the first ETS phase. These installations were responsible for about 40% of the total EU CO_2 emissions. For the 27 member states except Romania, Bulgaria, and Malta, the total verified emissions have increased by 1.88% (EU, 2008) during the first phase of the ETS scheme.
- The second phase started on the 01st of January 2008 and it has ended by 31st of December 2012. It coincides with the first Kyoto commitment phase. Compared to the first phase, the second phase has been extended to cover CO2 emissions from more industries like glass, mineral wool, gypsum, offshore oil and gas production, petrochemicals and integrated steelworks. CDM and JI credits were introduced by the Directive 2004/101/EC (EU, 2004).
- The third stage will be implemented between the 1 January 2013 and 31 December 2020. This phase implements a series of changes compared to phase II:
    - an harmonized allocation of free emission allowances

- an overall EU emissions cap will be set superseding the 27 National Allocation Plans;
- 50% of EU Allowances (EUAs) and 15% of EU Aviation Allowances (EUAAs) will be auctioned (Ministerul Mediului si Pădurilor, 2012).

3. Accounting practices for greenhouse gas emissions

The issues in discussion regarding the accounting for emission allowances in an operational emissions rights cap and trade scheme like the EU ETS are related to the recognition of these allowances.

Several accounting treatments of GHG emissions allowances have been identified (Deloitte, 2007; Tang & Fielder, Ernst & Young, 2011):

1. The IFRIC3 approach: following IFRIC 3 recommendations, on initial recognition, the emission allowances should be recognized as an intangible asset measured at its fair value. The entity should follow the recommendations of IAS 38 Intangible Assets (IASB, 2012a). If acquired for a value that is less than their fair value, a government grant should be recognized in accordance with IAS 20 Accounting for Government Grants and Disclosure of Government Assistance (IASB, 2012b). The government grant should be treated as deferred income. It should be recognized systematically as income over the period for which the emissions allowances were issued. The subsequent evaluation of the emissions allowances can be done under either the cost or the revaluation model described in IAS 38. The entity should recognize a liability, as it emits greenhouse gases, for its obligation to deliver a number of allowances equal to the actual emissions. IFRIC has interpreted this liability to be a provision as described by IAS 37 Provisions, Contingent Liabilities and Contingent Assets (IASB, 2012c) as the recognition of the liability requires the estimation of the costs (eg. the present market value of the allowances required to cover the actual emissions at the balance sheet date).
2. The government grants approach: this accounting treatment follows IFRIC 3 recommendations in the sense that the allowances are recognized initially at their fair value and at the same time a government grant is recognized. The obligation to deliver a certain number of allowances at the end of the compliance period is recognized as a provision measured depending on the estimated shortfall of allowances (Deloitte, 2007):
   - If the entity has enough emission allowances to settle its liability , the provision should be recognized based on the estimated cost of extinguishing the obligation (the carrying value of the allowances);
   - If the entity has a shortfall of emissions allowances, the provision should be recognized at the market value of the allowances required cover the deficit. If the entity is unable to obtain enough emission allowances to cover the shortfall, it will suffer penalties and still be required to deliver the allowances.
3. The net liability or off balance sheet approach: the entity should recognize no asset and no deferred income as the emissions allowances are received. The allowances are recorded off balance sheet at their nominal value (zero if they are received for free). As the allowances are used to counterbalance the liability, no balance sheet accounting entries are made if the allowances are enough to cover the entities obligations arising from its CO2 emissions. If the entity has a deficit of allowances, the entity should recognize a provision measured at the present market value of the allowances required to cover its emissions obligation.

4. IFRIC 3 debate

IFRIC 3 draft D1 has been issued on 15 May 2003 (IASB, 2003) and was available on IASB's website during the comment period. 40 comment letters were received until the comment deadline which ended on 14 July 2003 (IAS Plus, 2012; Zhang-Debreceny, 2010).

The final version of IFRIC 3 „Emission Rights" was released on 2 December 2004 (IASB, 2004), with the intention to be effective for annual periods beginning after 1 March 2005, the first year of the EU Emission Trading Scheme implementation.

Right from the start, the interpretation has been controversial. In a letter to the general director of the European Commission Directorate General for the Internal Market, EFRAG (The Technical Expert Group of the European Financial Reporting Advisory Group), recommended the EU commission not to adopt IFRIC 3 (EFRAG, 2005; Deloitte, 2005). The main concerns of EFRAG regarding IFRIC 3 were:

- A measurement mismatch between the assets and liabilities (the emissions allowances at hand are measured at cost and their corresponding liability is measured at fair value), for entities that follow the cost model described in IFRIC 3. This will lead to artificial values in the balance sheet of an entity which does not trade these certificates, but is affected by changes in the market price of the allowances.
- A mismatch in the place where the gains and losses are presented for an entity that follows the revaluation model described in IFRIC 3. This model solves the discrepancies between the values of the allowances and their corresponding liability but it introduces a new discrepancy, in the situation the value of the emissions allowances changes because revaluation gains are recognized directly in equity while expenses relating to the liability are recognized in profit or loss

- A timing mismatch between the moment the asset is recognized (the allowances should be recognized at the moment when they are obtained), and the moment when the liability would be recognized (it should be recognized as the entity emits GHGs).
- EFRAG has also showed concerns regarding the measurement of the asset (the allowances) and liabilities (the provision) that must be continued even though the compliance period is over until the settlement of the liability.

Less than a year after it was issued, IFRIC has withdrawn IFRIC 3 (IASB, 2005). In December 2007, IASB has started a new project in order to provide guidance on accounting for carbon allowances called Emissions Trading Schemes Project (IASB, 2011; FASB, 2010).

Work on the Emissions Trading Schemes Project was paused in November 2010 when, in a joint meeting between the IASB and the FASB the timetable of several projects including the Emissions Trading Schemes has been amended (IASB, 2011, FASB, 2010).

4. Accounting for green gas emissions in Romania

In Romania, the local accounting regulations are set by Order no. 3055/2009 of the Ministry of Public Finance, published in the Official Journal of Romania, Part I, no. 766 and 766bis, dated 10 November 2009 (Romanian Ministry of Public Finance, 2009). Although not explicitly stated by the above order, the accounting treatment of greenhouse gas emission certificates is implied by the accounts imposed by Order no. 3055/2009. GHG emissions should be recognized off balance sheet, at their nominal value. The shortfall or excess of allowances will be recognized in the profit or loss as they are bought or sold by the entity.

Recently, the above regulations have been amended by Order no. 1118 of the Ministry of Public Finance, published in the Official Journal of Romania, Part I, no. 603 din 22 august 2012. This order states that GHG emission certificates should be recognized as fixed assets (if the entity is expecting a profit in the long term) or in the category of short term investments (if the entity is expecting a profit in the short term). The accounting of the greenhouse gas emissions allowances described by Order no. 1118 is appropriate mostly for traders of such certificates and not for manufacturers (the installations that are part of the EU ETS directive) (KPMG, 2012).

The above accounting treatment of greenhouse gas emissions allowances by Romanian companies resembles the net liability or off balance sheet approach.

5. Conclusions

The absence of accounting standards regarding the accounting of emissions allowances has given birth to a diversity of accounting practices, which makes the financial statements of large companies in Europe, taking part in EU ETS, difficult to compare. There are also a lot of concerns about the true and fair image offered by this variety of accounting models.

New accounting models have been proposed such as the intended use model or 'assets measured initially and subsequently at fair value' (IFAC, 2012).

The majority of the enterprises in the EU ETS, including all Romanian companies, uses a net model (off balance sheet method) and only account for their net position (Lowel et. al., 2010). This approach makes it impossible to determine a company's exposure to carbon emissions regulations and carbon markets based on its financial statements.

The year 2013 will mark a turning point in EU ETS as it is the beginning of the 3rd compliance period. The main characteristic of this compliance period is that a large number of allowances will no longer be allocated free of charge making the off balance sheet accounting model obsolete. Although Romania is exempted from the obligation to auction EU ETS allowances in the 3rd compliance period, the currently used accounting model is likely to change as new accounting standards emerge.

The off balance sheet solution adopted in Romania is a partial fix for the issues identified with the solution proposed by IFRIC, but it does not it does not meet the criteria of understandability, relevance, reliability and comparability of the financial information.

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